ISO/IEC JTC 1

Study Group on Big Data (SGBD)

Document Type: **National Body Contribution**

Document Title: **KNB Proposal on NWIP on Big Data Reference Architecture**

source: **Korean National Body (KATS)**

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Source: Korean National Body (KATS)

Closing date for voting	Reference number (to be given by the Secretariat)
Date of circulation	**ISO/TC / SC N**
Secretariat	☐ **Proposal for new PC**

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee with a copy to the Central Secretariat and, in the case of a subcommittee, a copy to the secretariat of the parent technical committee. Proposals not within the scope of an existing committee shall be submitted to the secretariat of the ISO Technical Management Board.

The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, or organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

IMPORTANT NOTE: Proposals without adequate justification risk rejection or referral to originator.
Guidelines for proposing and justifying a new work item are contained **in Annex C of the ISO/IEC Directives, Part 1.**

☒ The proposer has considered the guidance given in the Annex C during the preparation of the NWIP.

Proposal (to be completed by the proposer)

Title of the proposed deliverable. *(in the case of an amendment, revision or a new part of an existing document, show the reference number and current title)* English title   INFORMATION TECHNOLOGY – BIG DATA - Reference architecture   French title (if available)
Scope of the proposed deliverable. This International Standard provides a general requirements, conceptual model, and main components of Big Data. Also this International Standard is intended to facilitate the understanding of the operational intricacies in Big Data. Describe a generic high-level conceptual model that is an effective tool for discussing the requirements, structures, and operations inherent to Big Data as stated below. 1) Illustrate and understand the various Big Data components, processes, and systems, in the context of an overall Big Data conceptual model; 2) Provide a technical reference for government departments, agencies and other consumers to understand, discuss, categorize and compare Big Data solutions; and 3) Facilitate the analysis of candidate standards for interoperability, portability, reusability, and extendibility. Note - This project will not be addressing detailed specifications for any organizations' operational systems; detailed specifications of information exchanges or services; or recommendations or standards for integration of infrastructure products.

Purpose and justification of the proposal*

The purpose of this international standard will be to:

1) provides a common language for the various stakeholders

2) encourages adherence to common standards, specifications, and patterns

3) and provides consistency of implementation of technology to solve similar problem sets.

Justification:

Most Big Data projects use a Big Data reference architecture. Understanding the high level view of this reference architecture provides a good background for understanding Big Data and how it complements existing analytics, BI, databases and systems. But, the variety of architectures, frameworks or ecosystems, it is difficult to interoperate each other. In this reason, a standardized reference architecture is needed. And it will facilitate a shared understanding across multiple products, organizations, and disciplines about current architectures and future direction. Even though we cannot provide answers to all these questions in a single project, we can provide a framework for thinking and asking the right questions, and therefore set up a foundation for future work by others.

The reason for requiring justification statements with approval or disapproval votes is primarily to collect input on market or stakeholder needs, and on market relevance of the proposal, to benefit the development of the proposed ISO standard(s). Any NSB vote in relation to a proposal for new work may result in significant commitments of resources by all parties (NSBs, committee leaders and delegates/experts) or may have significant implications for ISO's relevance in the global community. It is especially important that NSBs consider and express why they vote the way they do. In addition, it is felt that it would be useful for ISO and its committees to have documentation as to why the NSBs feel a proposal has market need and market relevance. Therefore, please ensure that your justifying statements with your approval or disapproval vote convey the reason(s) why your national consensus does or does not support the market need and/or global relevance of the proposal.

If a draft is attached to this proposal,:

Please select from one of the following options (note that if no option is selected, the default will be the first option):

☐ Draft document will be registered as new project in the committee's work programme (stage 20.00)
☐ Draft document can be registered as a Working Draft (WD – stage 20.20)
☐ Draft document can be registered as a Committee Draft (CD – stage 30.00)
☐ Draft document can be registered as a Draft International Standard (DIS – stage 40.00)

Is this a Management Systems Standard (MSS)?

☐ Yes ☒ No

NOTE: if Yes, the NWIP along with the Justification study (see Annex SL of the Consolidated ISO Supplement) must be sent to the MSS Task Force secretariat (tmb@iso.org) for approval before the NWIP ballot can be launched.

Indication(s) of the preferred type or types of deliverable(s) to be produced under the proposal.

☒ International Standard ☐ Technical Specification ☐ Publicly Available Specification ☐ Technical Report

Proposed development track ☐ 1 (24 months) ☒ 2 (36 months - default) ☐ 3 (48 months)

Known patented items (see ISO/IEC Directives, Part 1 for important guidance)

☐ **Yes** ☒ **No** **If "Yes", provide full information as annex**

A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables. The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized.

The proposed work will consider the cloud overview and reference architectue as described in ISO/IEC 17788 and 17789 and partly adopt the work of those documents, particularly the common actors or activities.
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A listing of relevant existing documents at the international, regional and national levels.
ISO/IEC 17789 - Information Technology - Cloud Computing - Reference Architecture
ITU-T Y.BigData-reqts, Requirements and capabilities for cloud computing based big data

A simple and concise statement identifying and describing relevant affected stakeholder categories (including small and medium sized enterprises) and how they will each benefit from or be impacted by the proposed deliverable(s)

The result of this NWIP should help all Big Data customers and providers in their specification, Stakeholders include small, medium and large enterprises from the private, government and non-profit sectors. The result of this NWIP should help all of these Stakeolders to pick-and-choose best analytics tools for their processing and visualization requirements on the most suitable computing platforms and clusters while allowing value-added functionalitie.

Liaisons:	**Joint/parallel work:**
A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s). TeleMangement Forum ITU-T SG13 …	**Possible joint/parallel work with:** ☐ IEC (please specify committee ID) ☐ CEN (please specify committee ID) ☐ Other (please specify)

A listing of relevant countries which are not already P-members of the committee.

Preparatory work (at a minimum an outline should be included with the proposal)

☐ A draft is attached   ☐ An outline is attached   ☐ An existing document to serve as initial basis

The proposer or the proposer's organization is prepared to undertake the preparatory work required ☒ Yes ☐ No

Proposed Project Leader (name and e-mail address)	**Name of the Proposer** (include contact information)

Supplementary information relating to the proposal

☒   This proposal relates to a new ISO document;

☐   This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item;

☐   This proposal relates to the re-establishment of a cancelled project as an active project.

Other:

Annex(es) are included with this proposal (give details)

☐